

This page Is Inserted by IFW Operations  
And is not part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of  
The original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

## **IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning documents *will not* correct images,  
Please do not report the images to the  
Image Problem Mailbox.**

009260\* E4469960

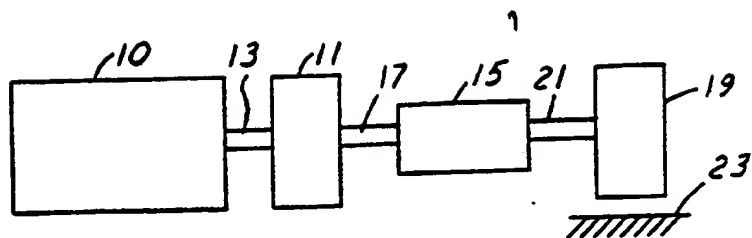


FIG.1

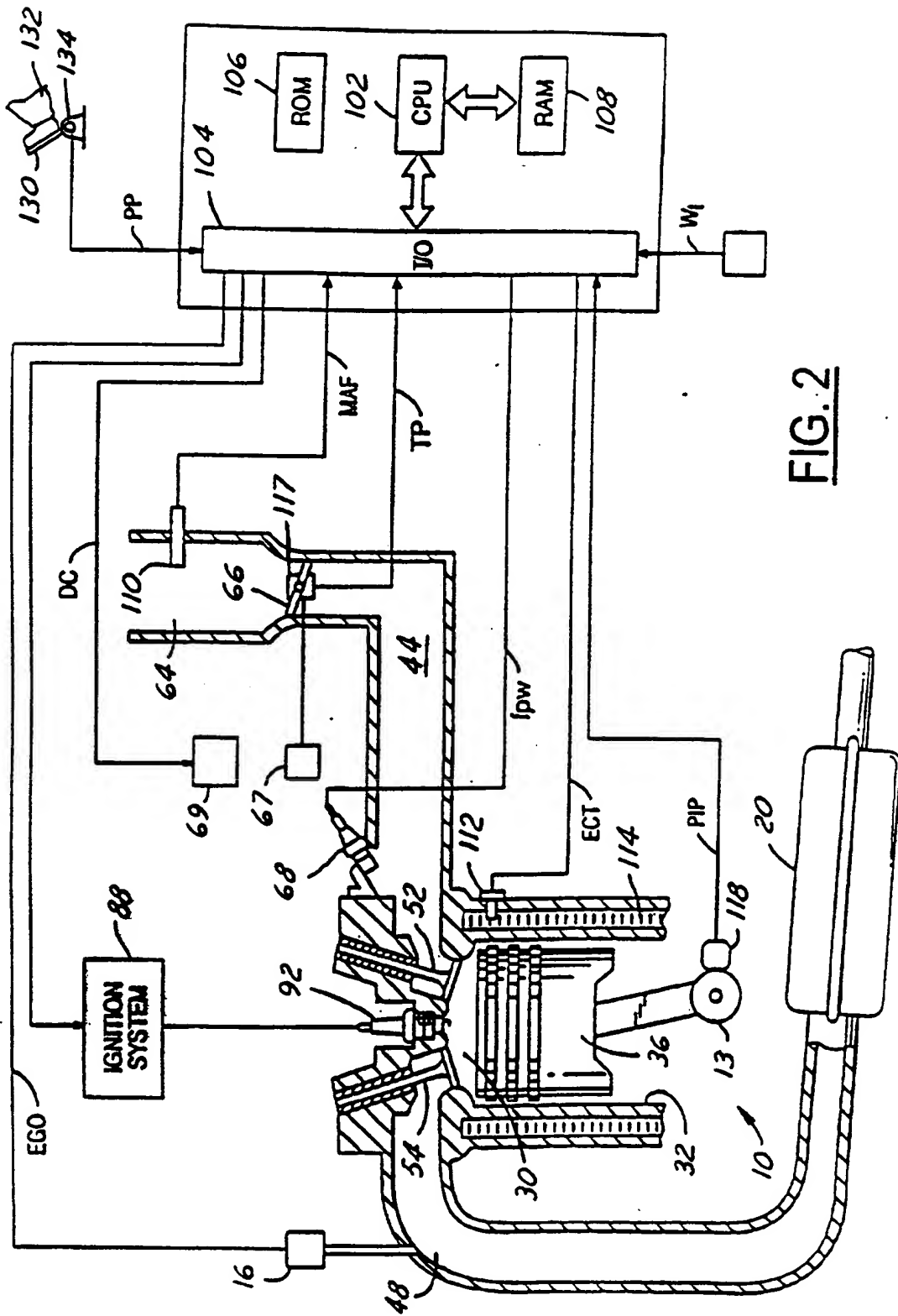


FIG. 2

Start

Arbitrate

wheel torque

calculate driver request

$$t_{go-arb-reg} = f(PP, VS) \quad - 310$$

calculate limit output torque ( $t_{go-arb-lim}$ )

312

calculate driver engine torque request for manual transmission and Auto-matic transmission - 314  
Neutral or Park ( $t_{ge-dd-reg}$ )

convert driver wheel torque request and limit torque to engine torque requests

$$t_{ge-arb-reg} = t_{go-arb-reg} * G1 + Loss$$

$$t_{ge-arb-lim} = t_{go-arb-lim} * G1 + Loss$$

316

max of

$t_{ge-dd-reg}$  and  $t_{ge-arb-reg}$

$$t_{ge-arb-reg} = \max \{ t_{ge-dd-reg}, t_{ge-arb-reg} \}$$

318

end

Start

calculate vehicle speed  
trajectory (max allowed  
vehicle speed during a  
tip-out)

410

$$tg\_vs\_des\_mx = f(PRNDL, VS, B00)$$

(SEE FIG 17)

412

APP < 0  
(closed pedal?)

N

Y

414

(A)

rate limit torque request

$$tqe\_daspot = tqe\_daspot - f(tqe\_daspot)$$

torque to a minimum  
of zero

416

$$tqe\_daspot = \max(tqe\_daspot, 0)$$

end

A

430

$tge\_daspot\_tmp = (tge\_brk\_reg - tge\_dasmf) * f(N)$

new series?  
 $tge\_daspot\_tmp > tge\_daspot$  ?

N

436

Y  
 $mul\_tmp = tge\_tcdasf$

$mul\_tmp = tge\_tcdasf$

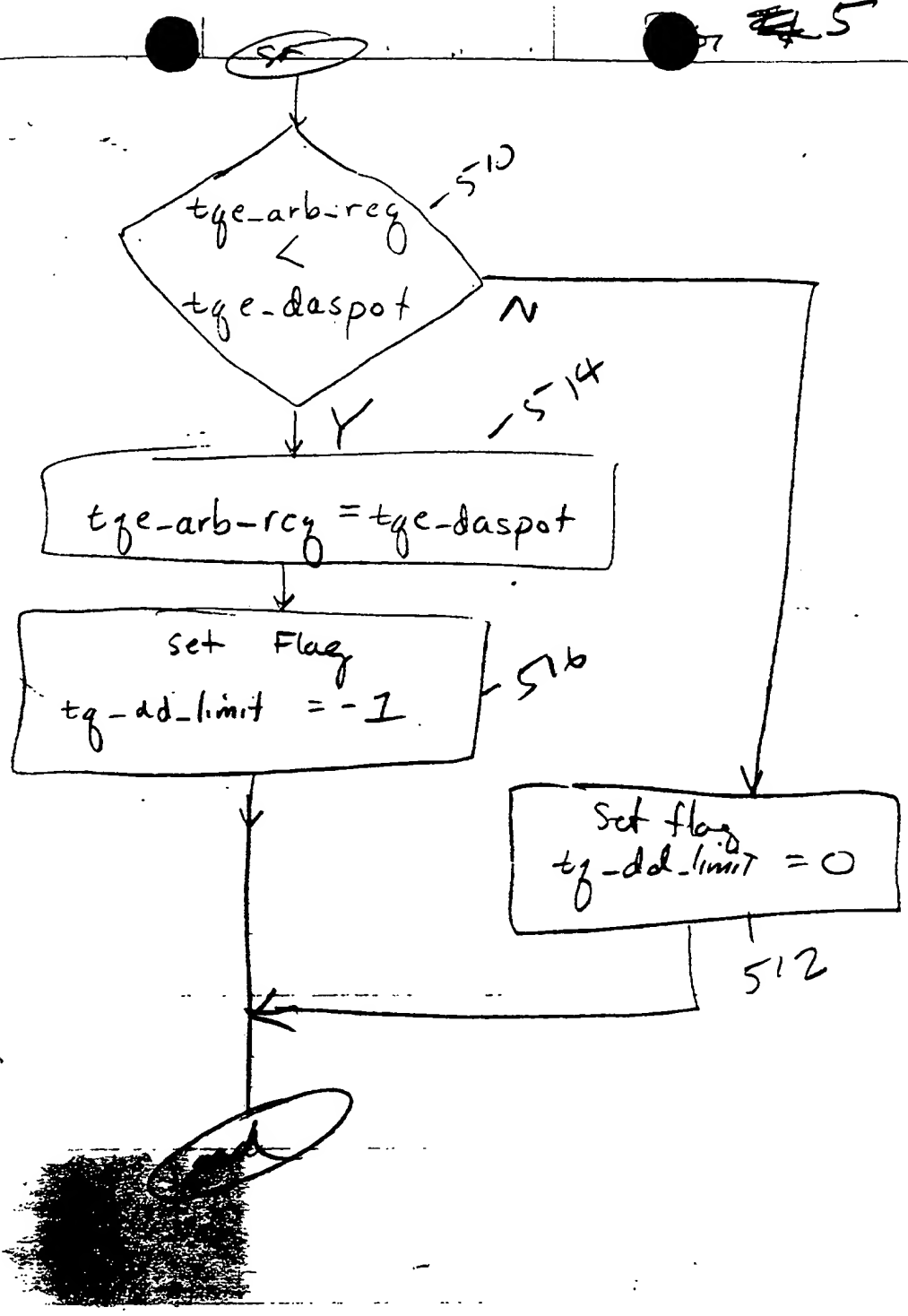
438  
 $tcdasf = mul\_tmp * ((tge\_kdas + tge\_daspot) \div (tge\_kdas + tge\_daspot))$

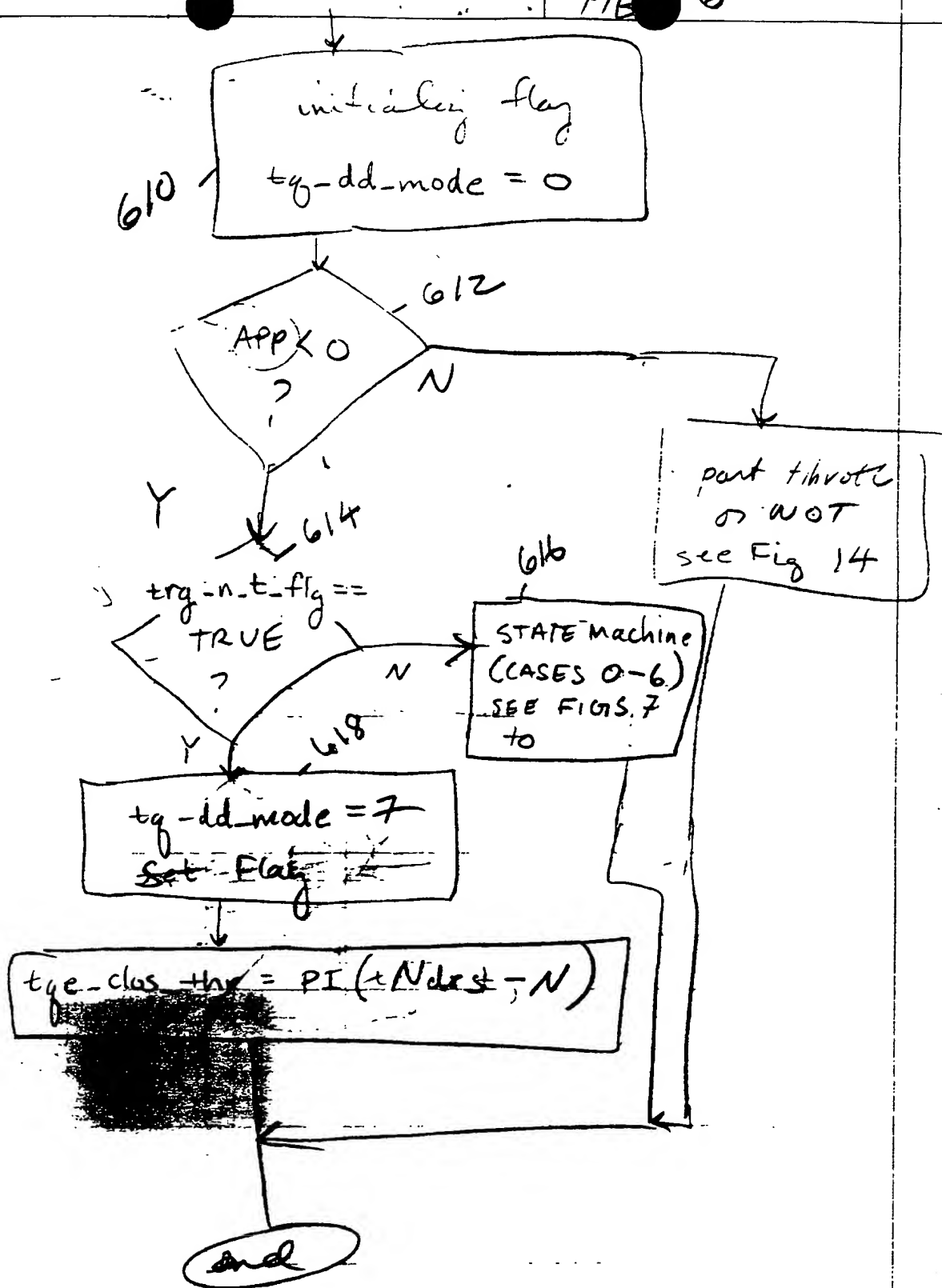
440  
 $filter\_constant\_tmp = f(\Delta t, tcdasf)$

442

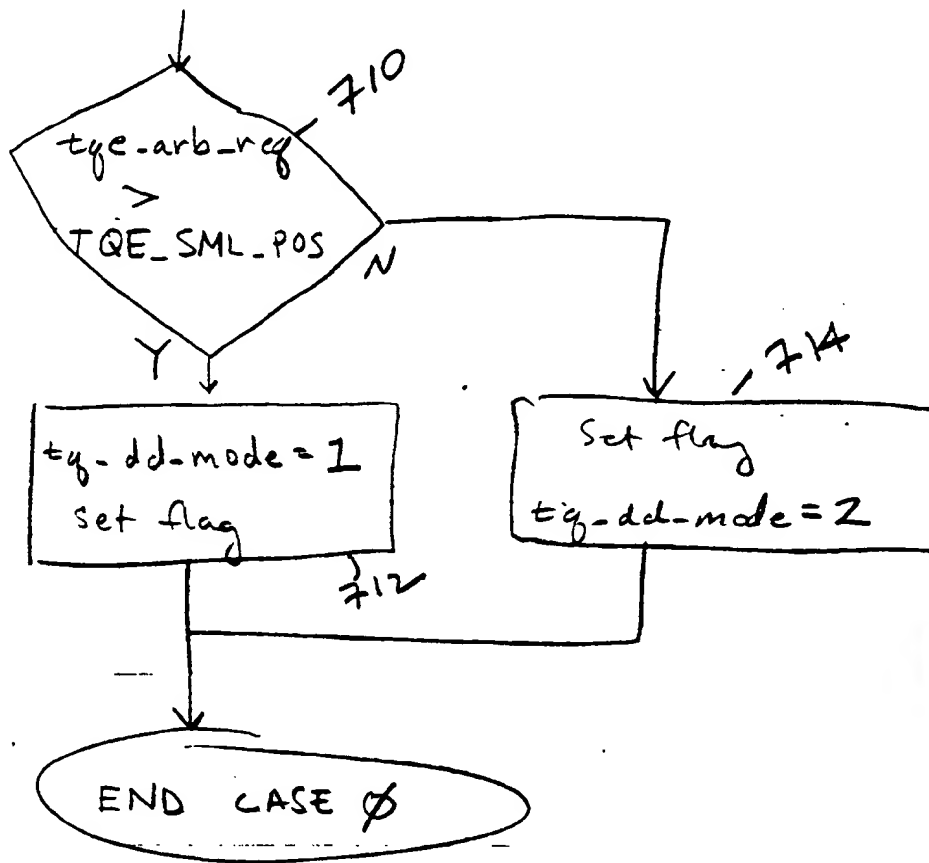
$tge\_daspot = LPF(tge\_daspot, tge\_daspot\_tmp, filter\_constant\_tmp)$

end

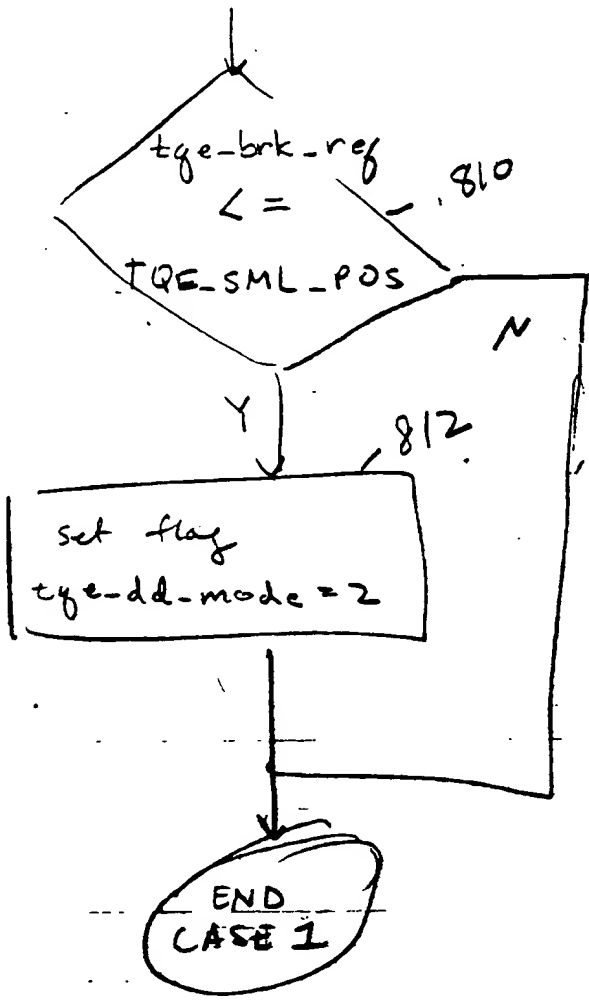






CASE  $\emptyset$ 

CASE 1



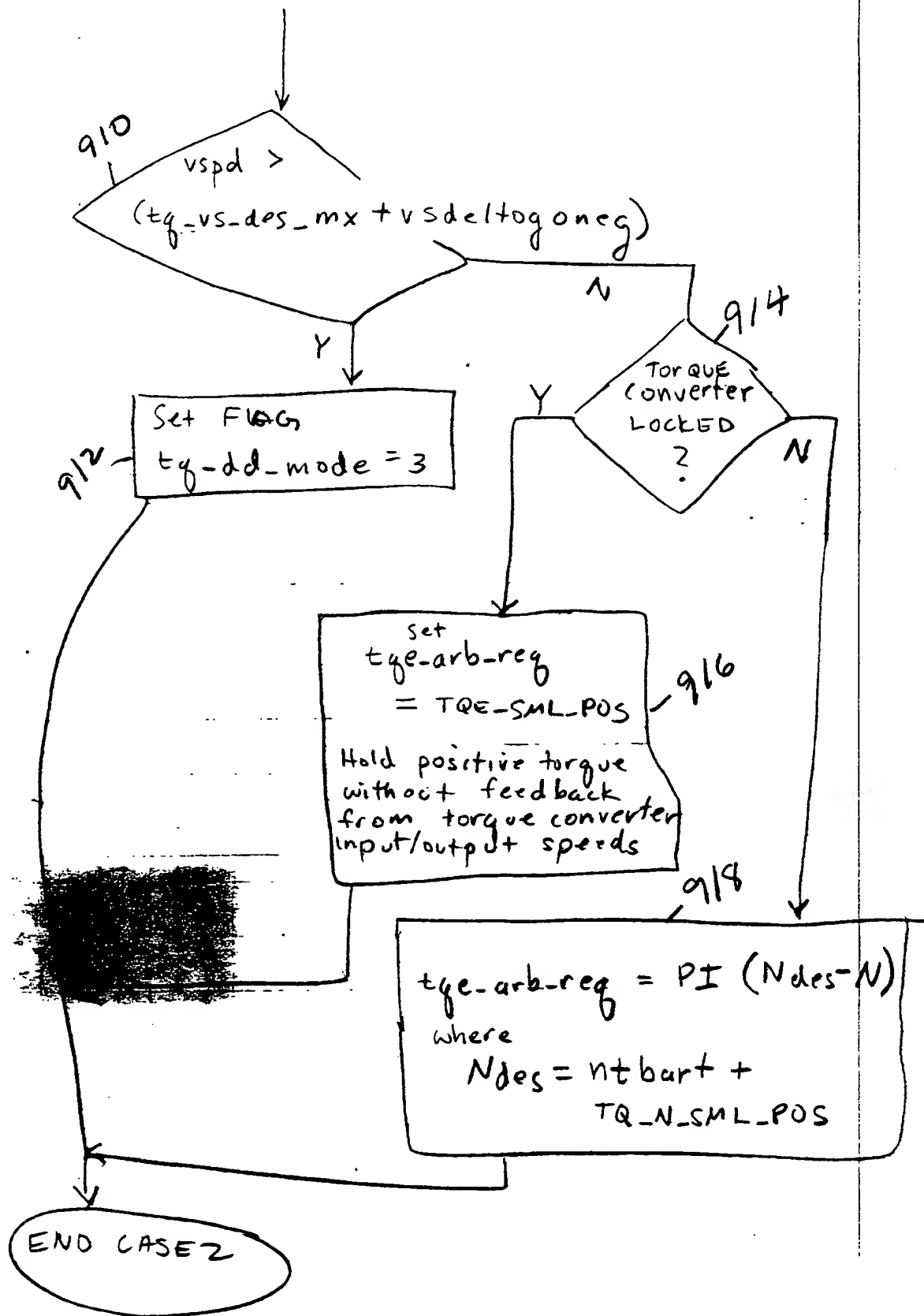
42-385 503 AND 10-11-1967  
42-385 503  
RECEIVED WHILE SEARCHING



009260" E4469960



## CASE 2



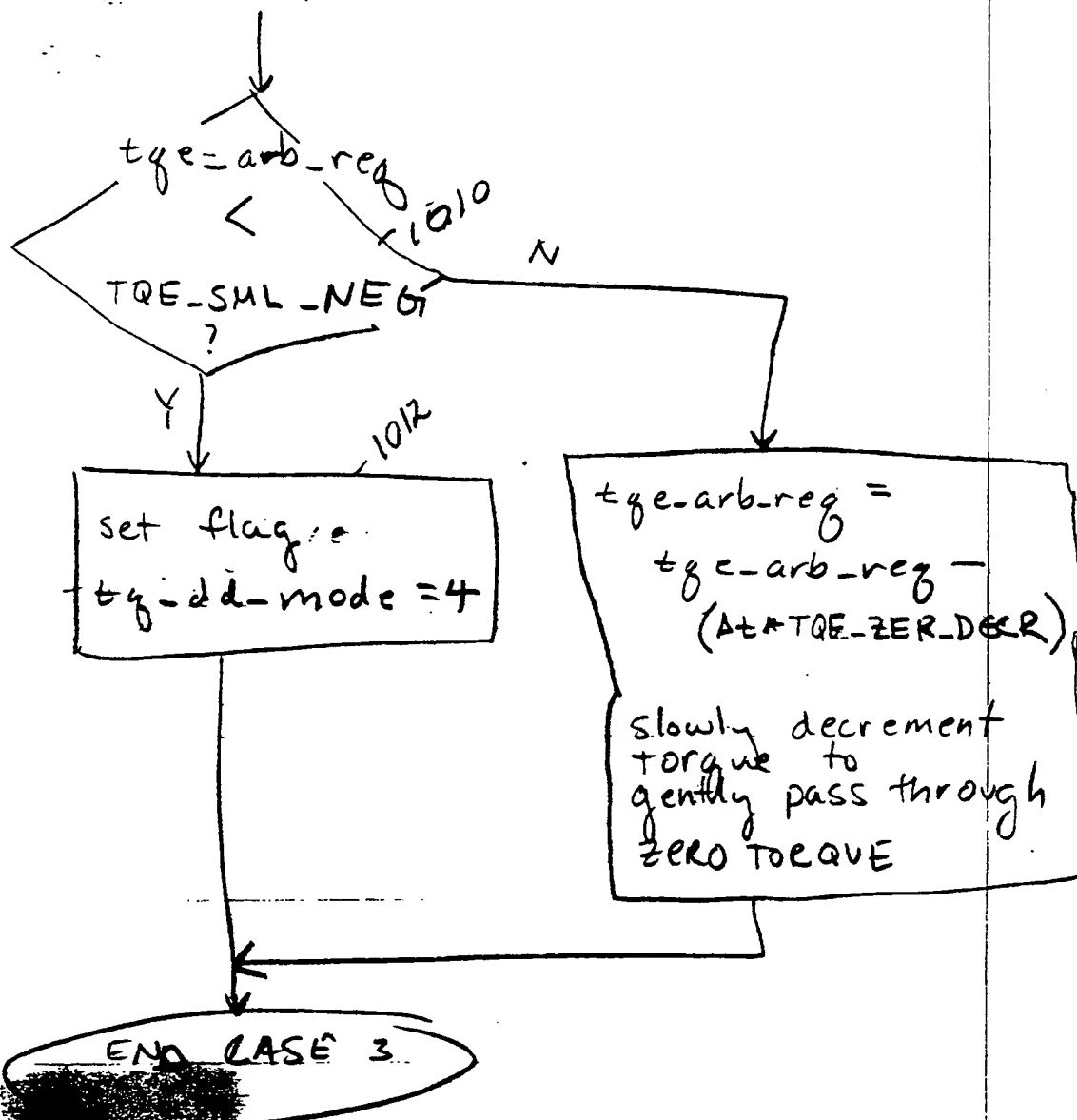
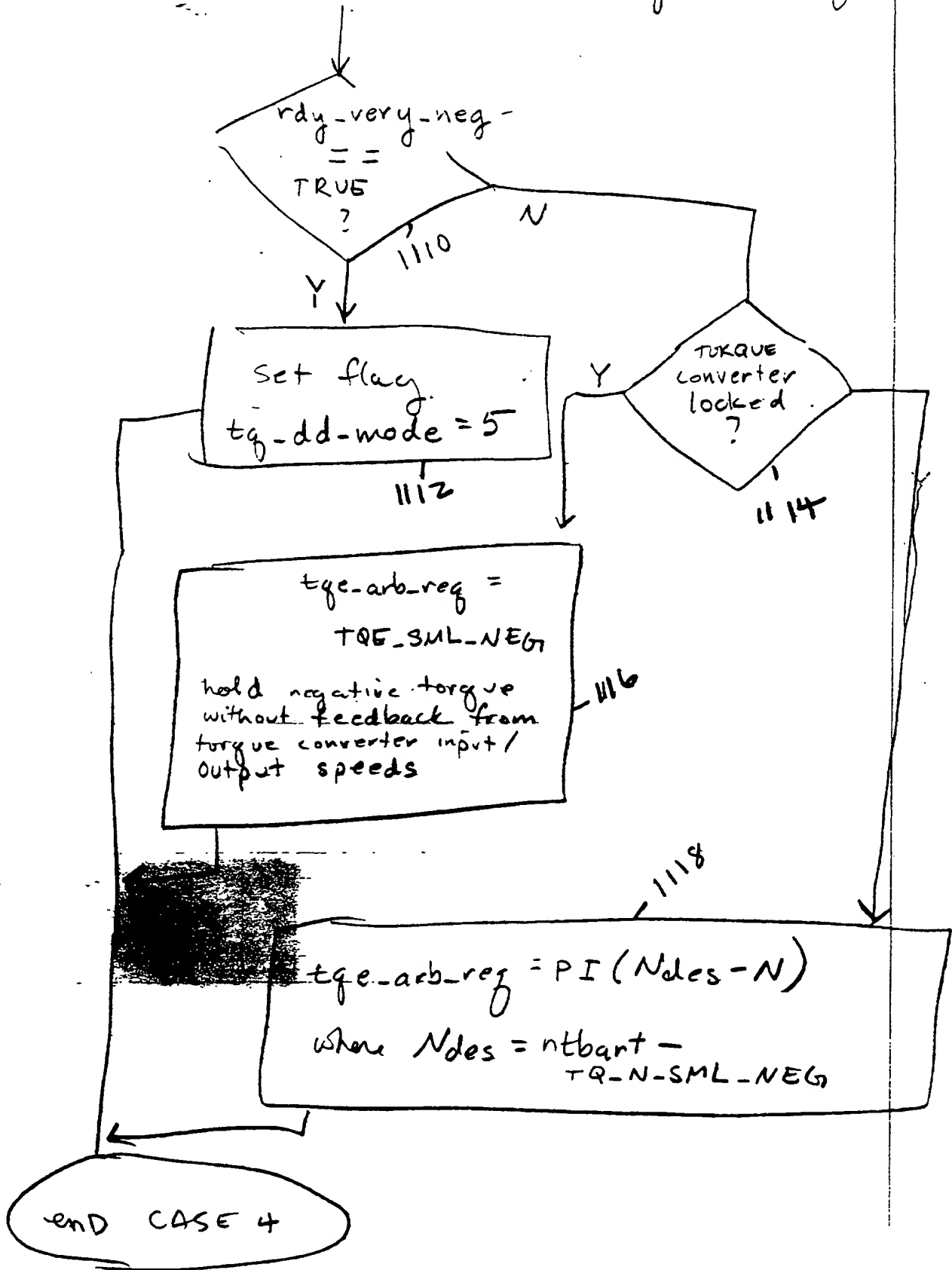
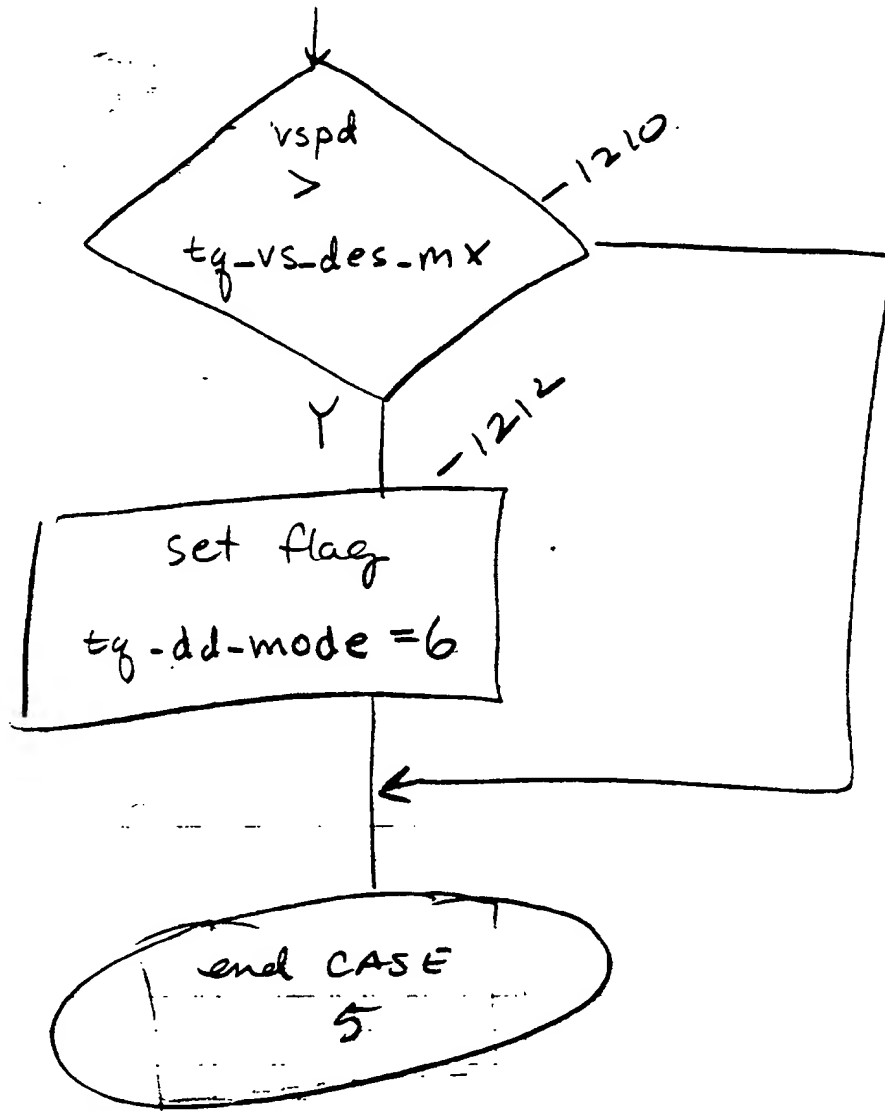
[illegible]

Fig. 11

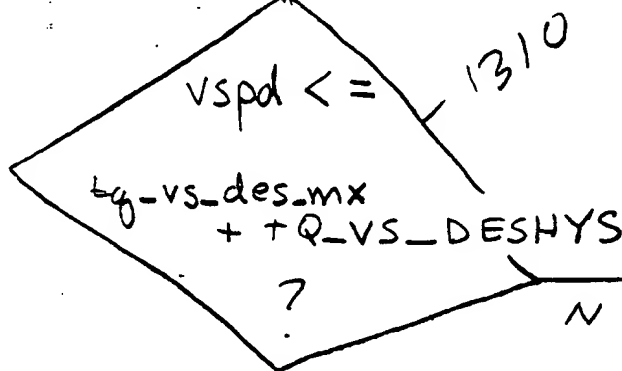
# CASE 4 Hold Negative torque



CASE 5



CASE 6



Set Flag  
 $t_{q-dd-mode} = 5$

Block 1314:

$$t_{q-arb-req} = PI(t_{q-vs-des-mx} - v_{spd})$$

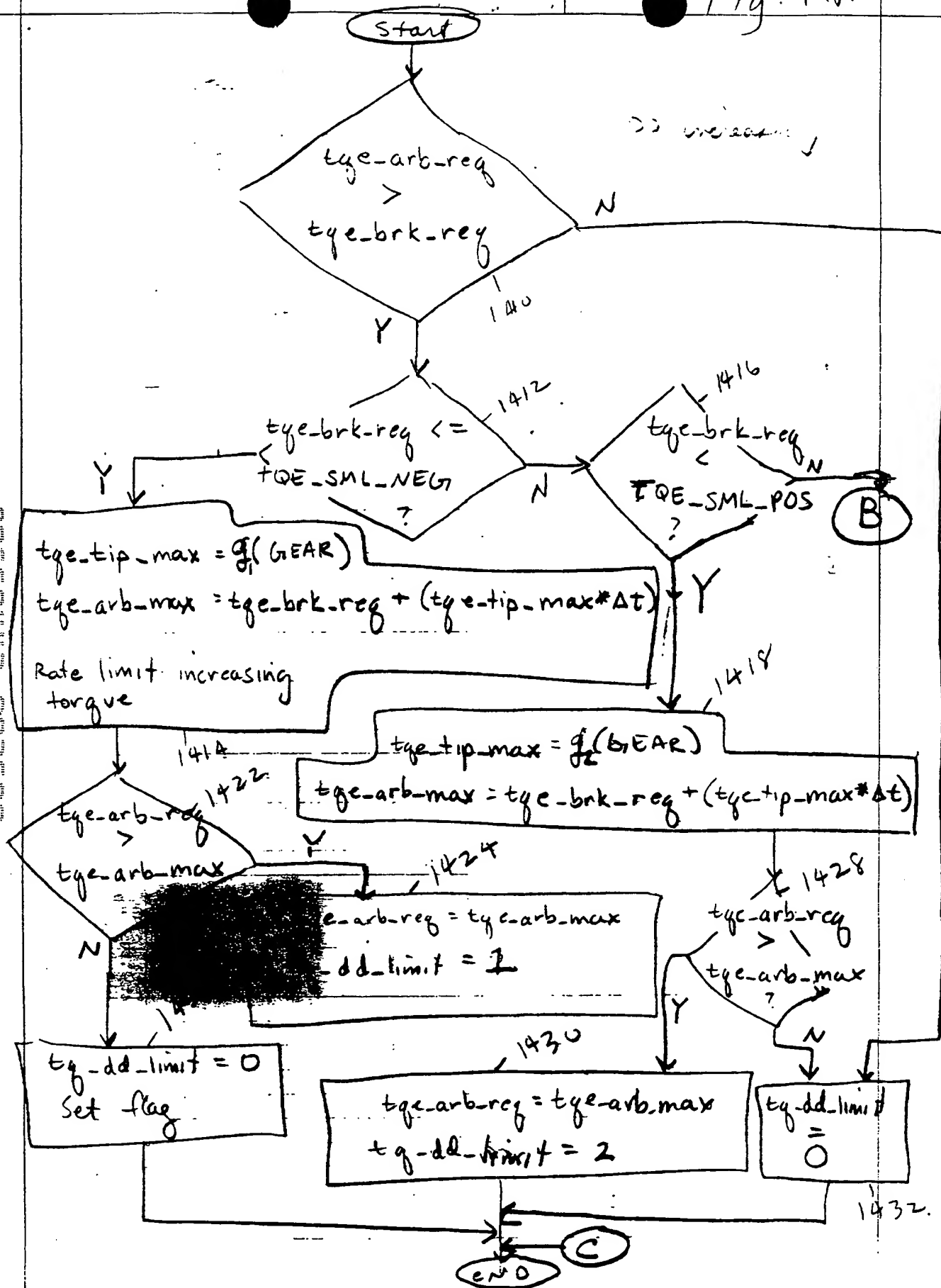
Feedback control of vehicle speed

CASE 6

Fig. 14A

National Band

009260-ETH0960





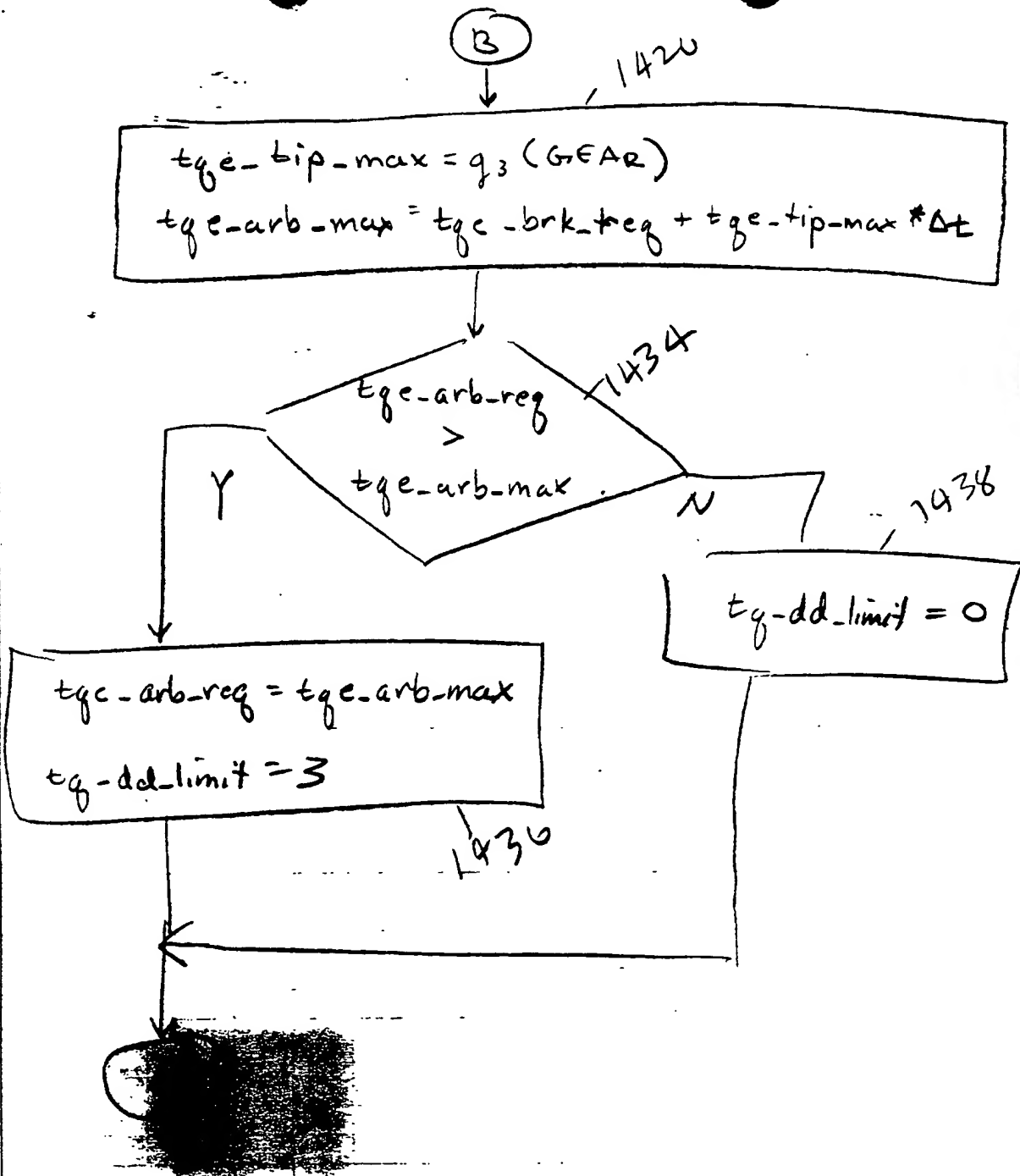
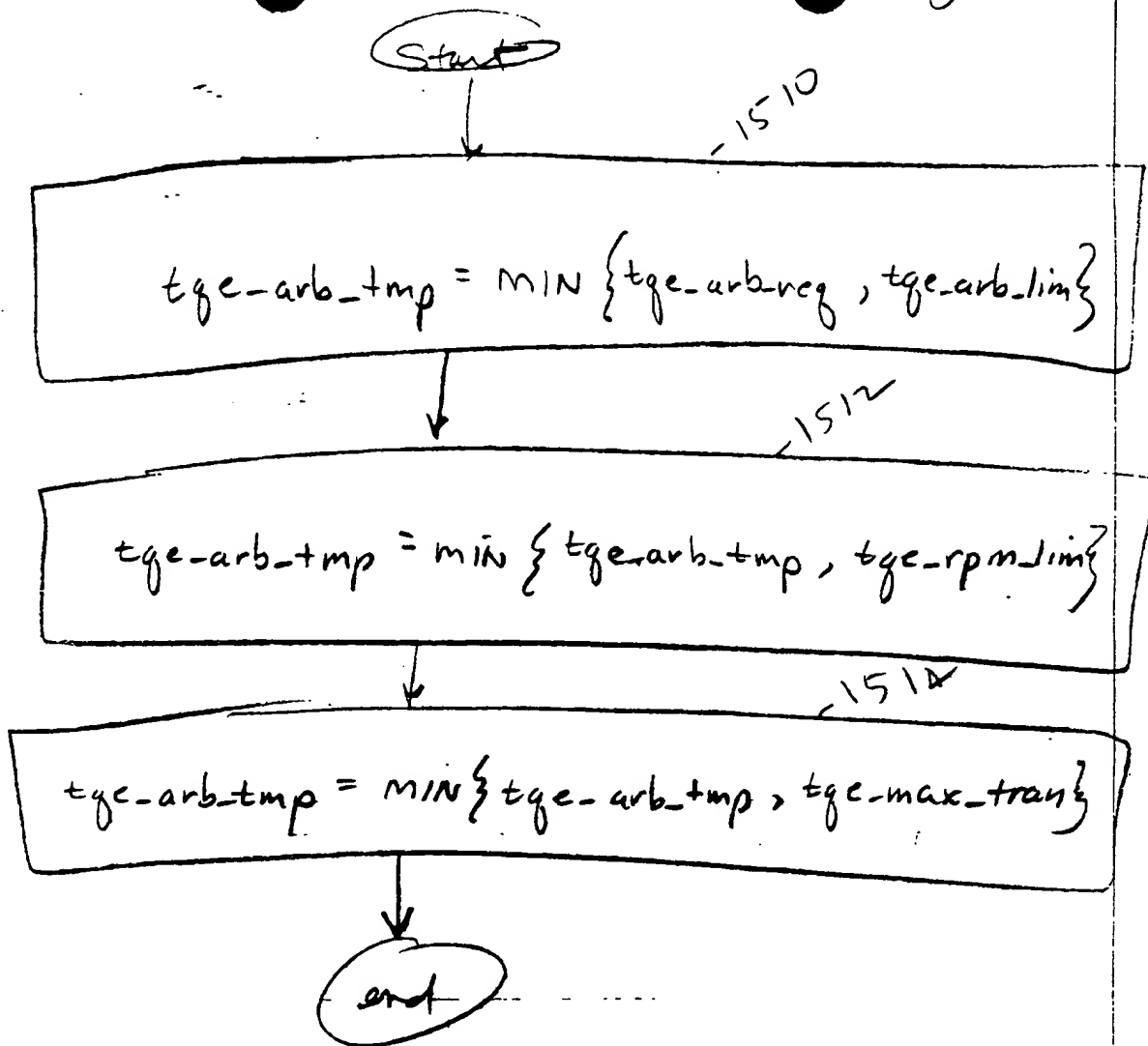


FIG. 15



START

$$tge\_antistal = h \{ (N_{des} - N), (tq\_source) \}$$

$$tge\_brk\_req = \max(tge\_arb\_tmp, tge\_antistal)$$

$$tge\_minairmf = f(N)$$

$$idle\_am\_mul = h \{ (N_{des} - N), (vspd\_minmph) \}$$

$$desmaf\_load\_tmp2 = (idle\_am * idle\_am\_mul)$$

$$desmaf\_load\_tmp = desmaf\_load\_tmp2$$

$$N * numcyl - 0 \div 2 * sav\_chg$$

$$tge\_desmaf = desmaf\_load\_tmp / TQ\_Z\_LOAD$$

$$tge\_min\_air\_tmp = \max(tge\_minairmf, tge\_desmaf)$$

END

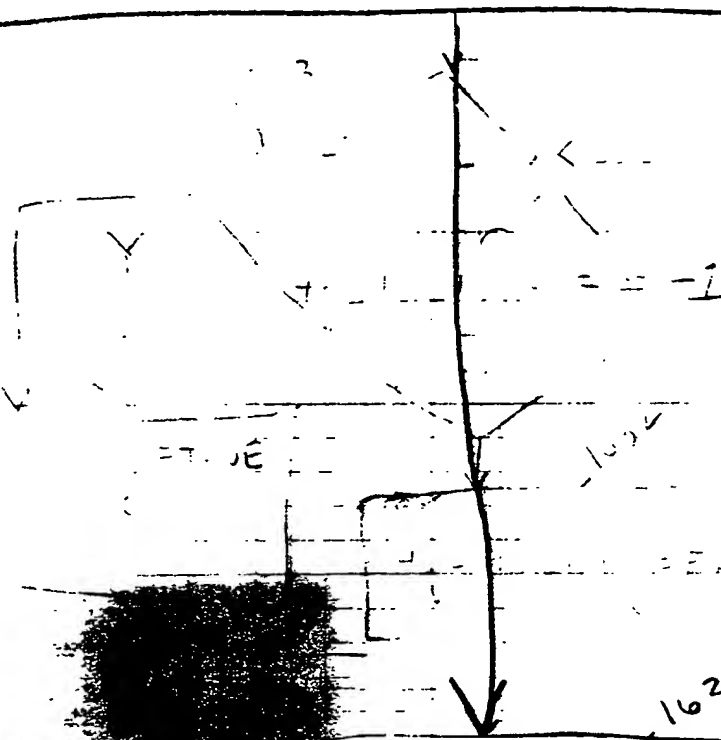
1624

C

$$\text{desmaf} = \left( \frac{t_{ge\_min\_air\_tmp}}{t_{g\_2\_load}} \right) * \left( \frac{N * \text{numcyl} - 0}{2} * \text{sarchg} \right)$$

1626

$$t_{ge\_min\_air\_brk\_tmp} = t_{ge\_min\_air\_tmp} - t_{ge\_los}$$



1634

$$t_{ge\_brk\_air} = \text{MAX}(t_{ge\_min\_air\_brk\_tmp}, t_{ge\_brk\_reg})$$

D

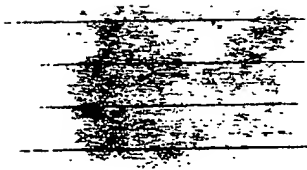
Fig 16C ~~###~~

$v_{spd} - \text{min mph}$

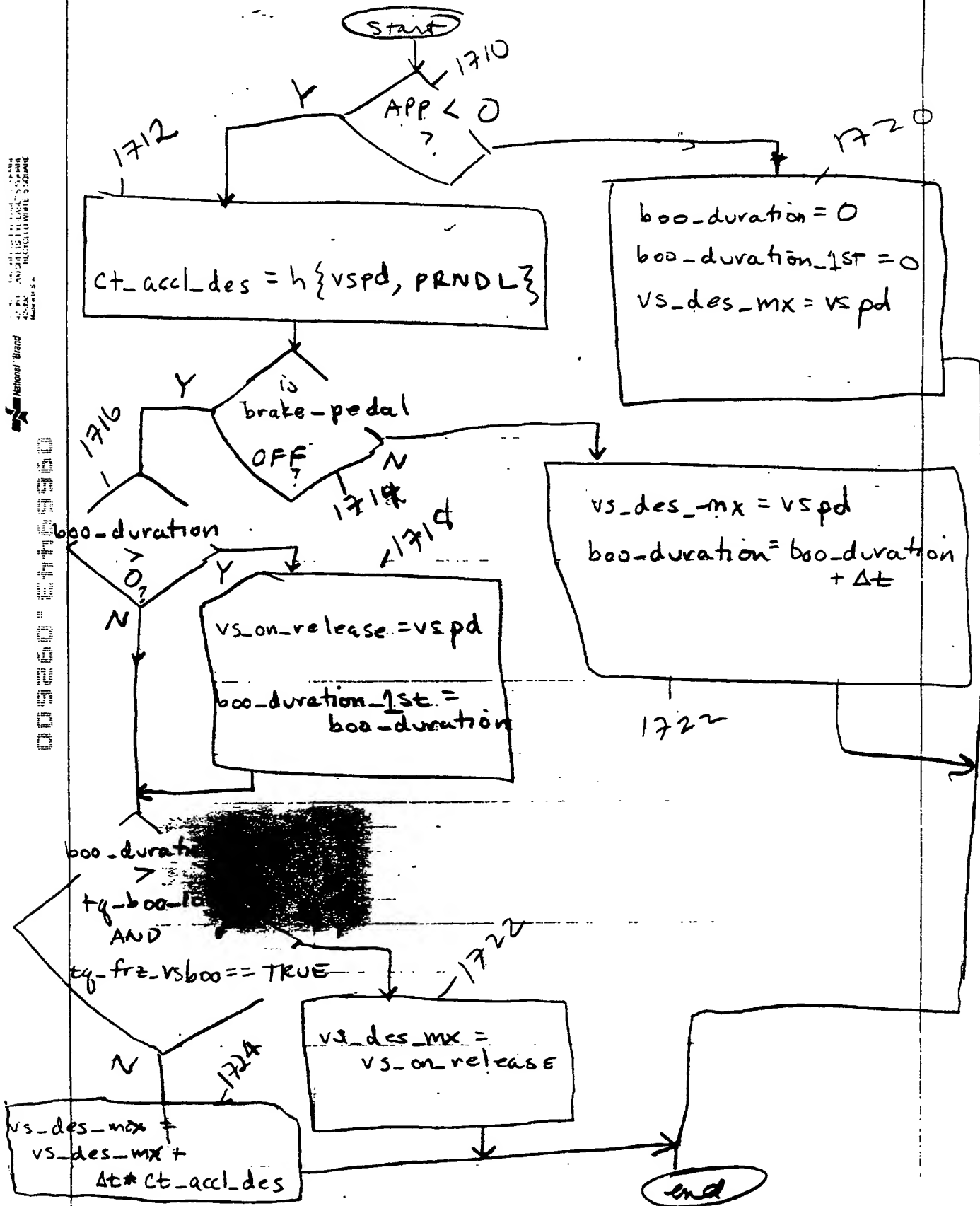
.5	...	0	0
.6			0
.			:
.			:
1	...	.6	.5

$N - \text{Nodes}$

009250" E4463950



## STEP OF FIGURE 4



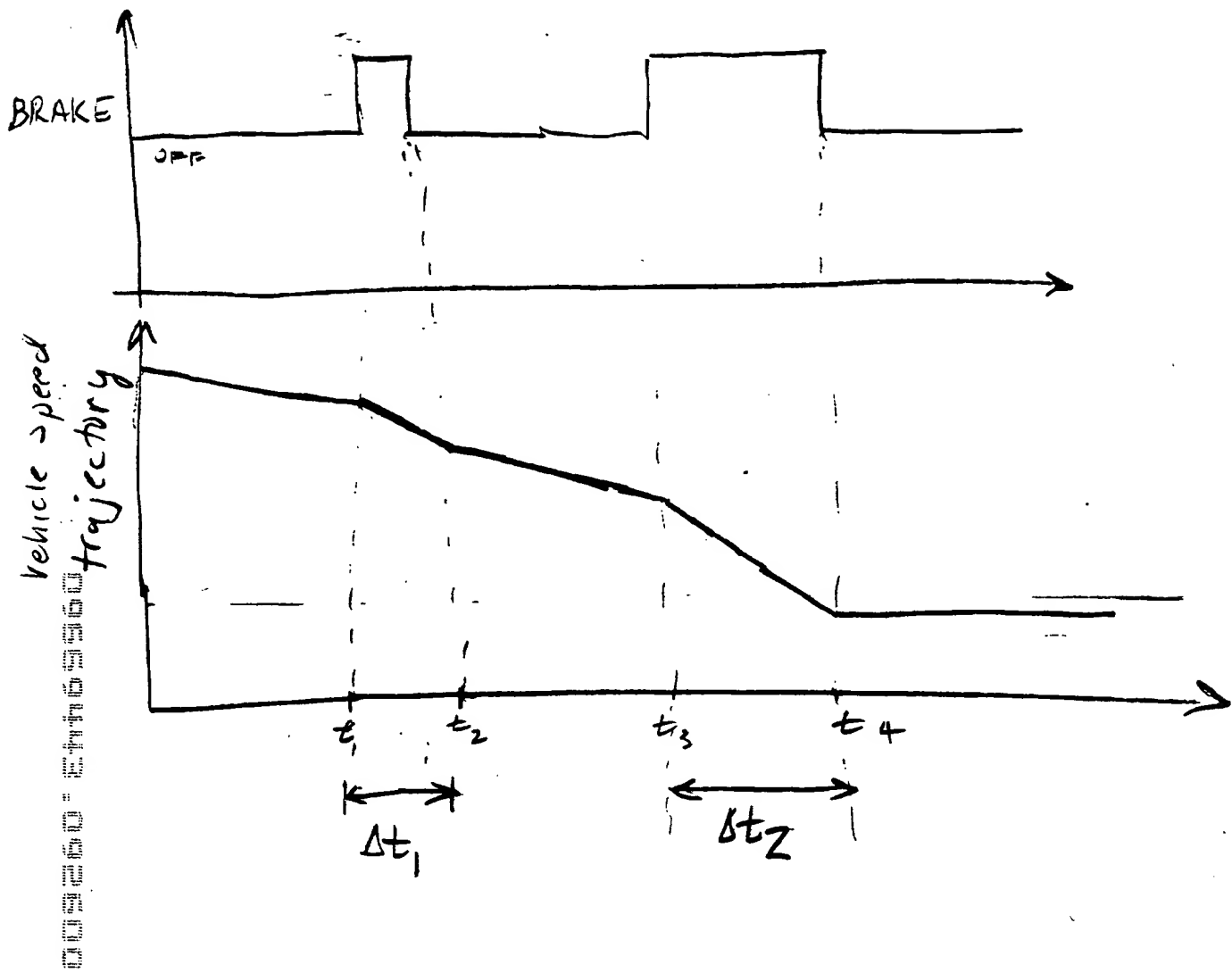
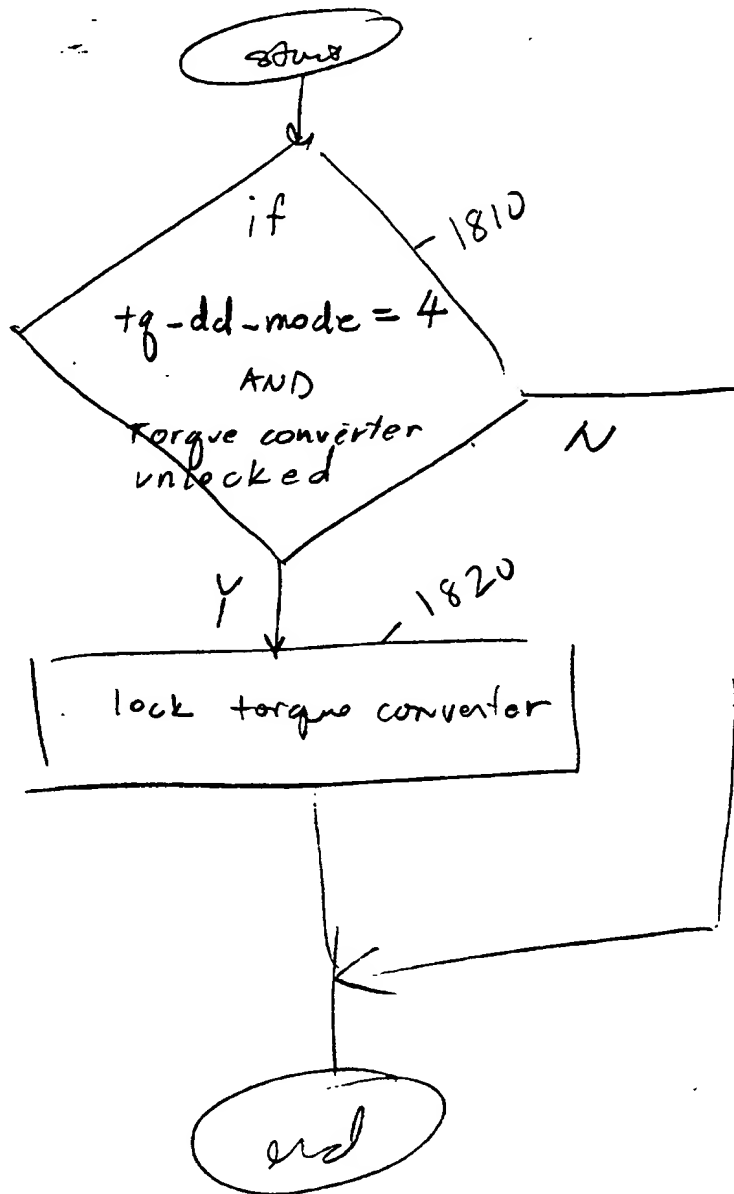


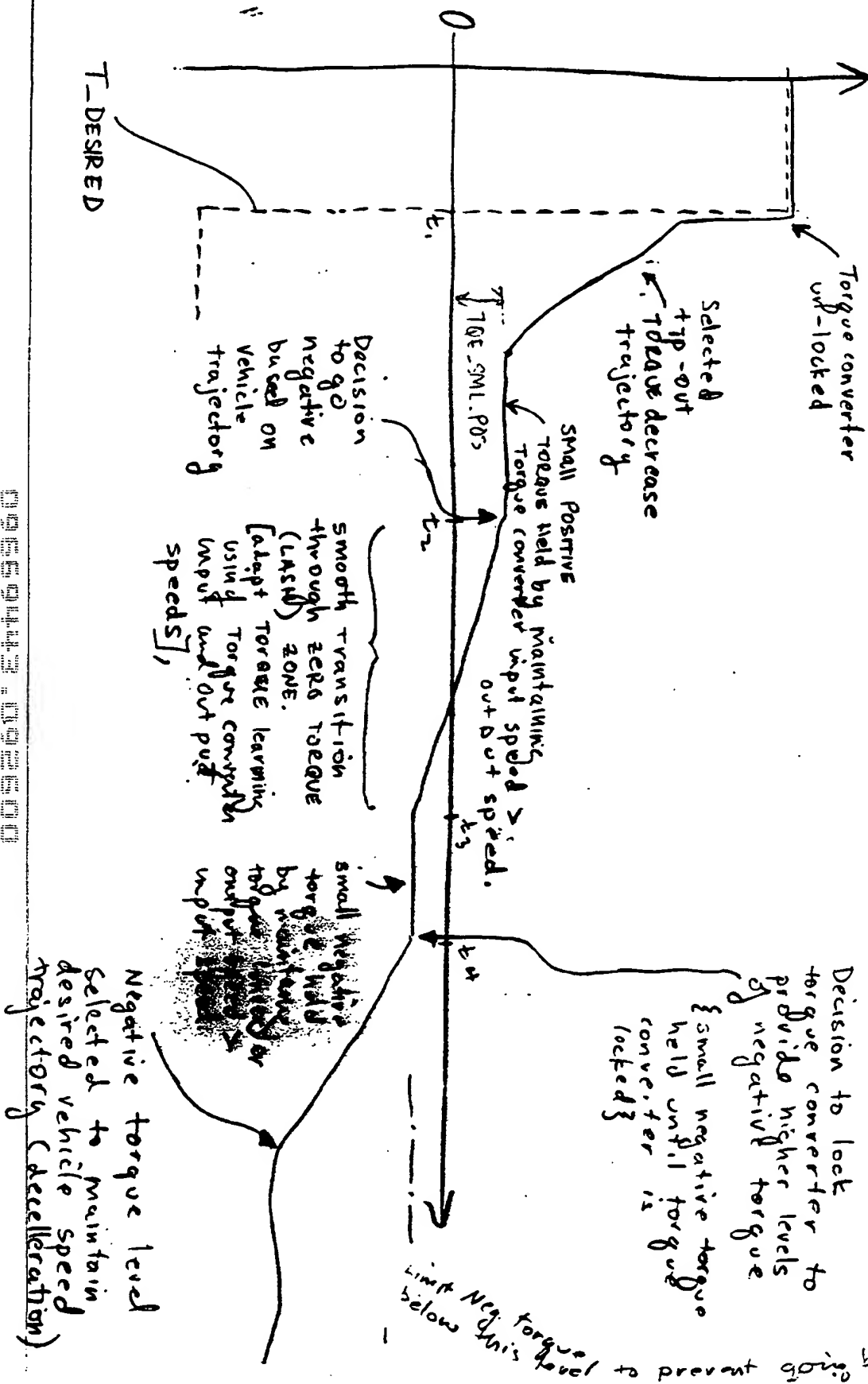
Fig 17B

#4





TIP-OUT CONTROL (1)



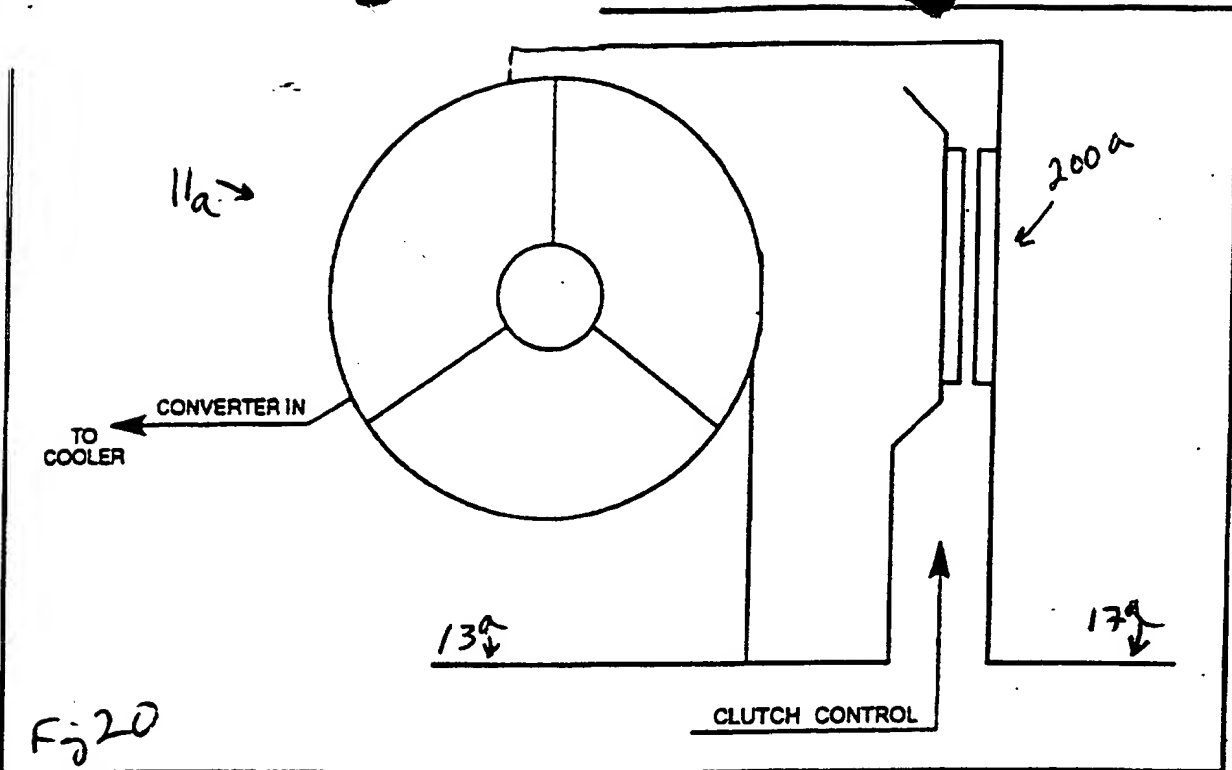


Figure 19 - Two-Circuit Unlock Converter Clutch (Disengaged)

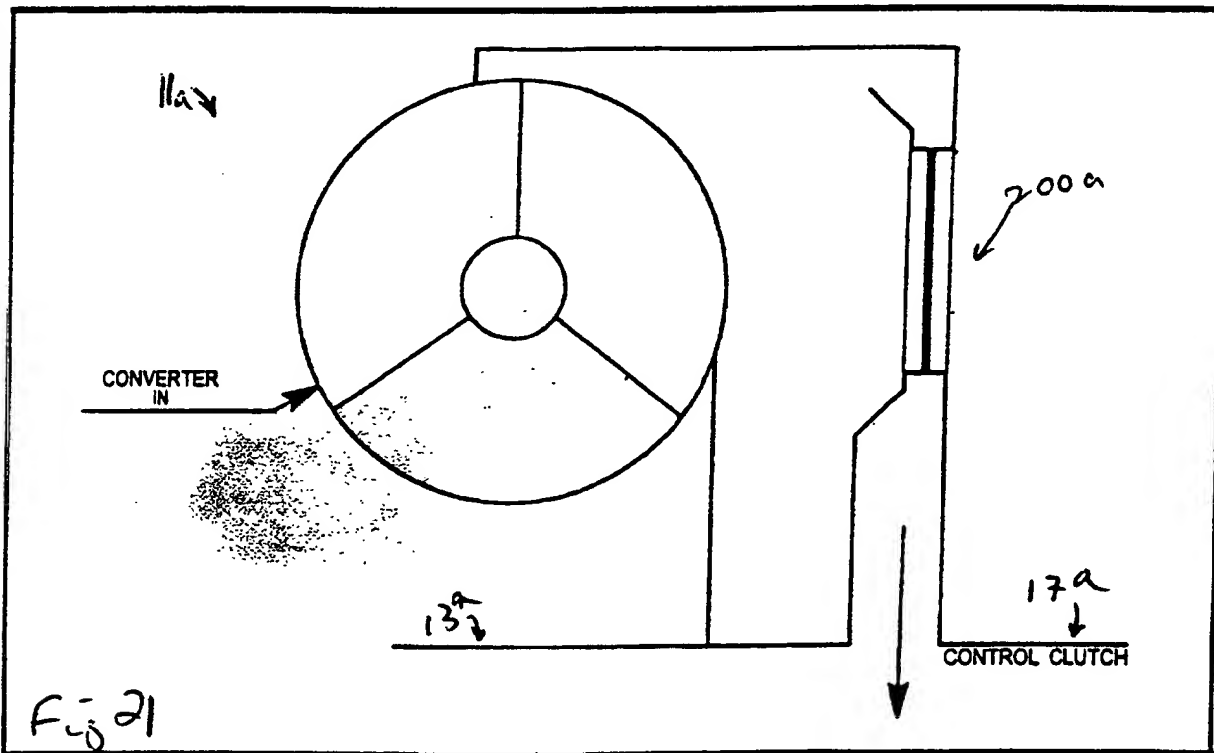


Figure 20 - Two-Circuit Lockup Converter Clutch (Engaged)

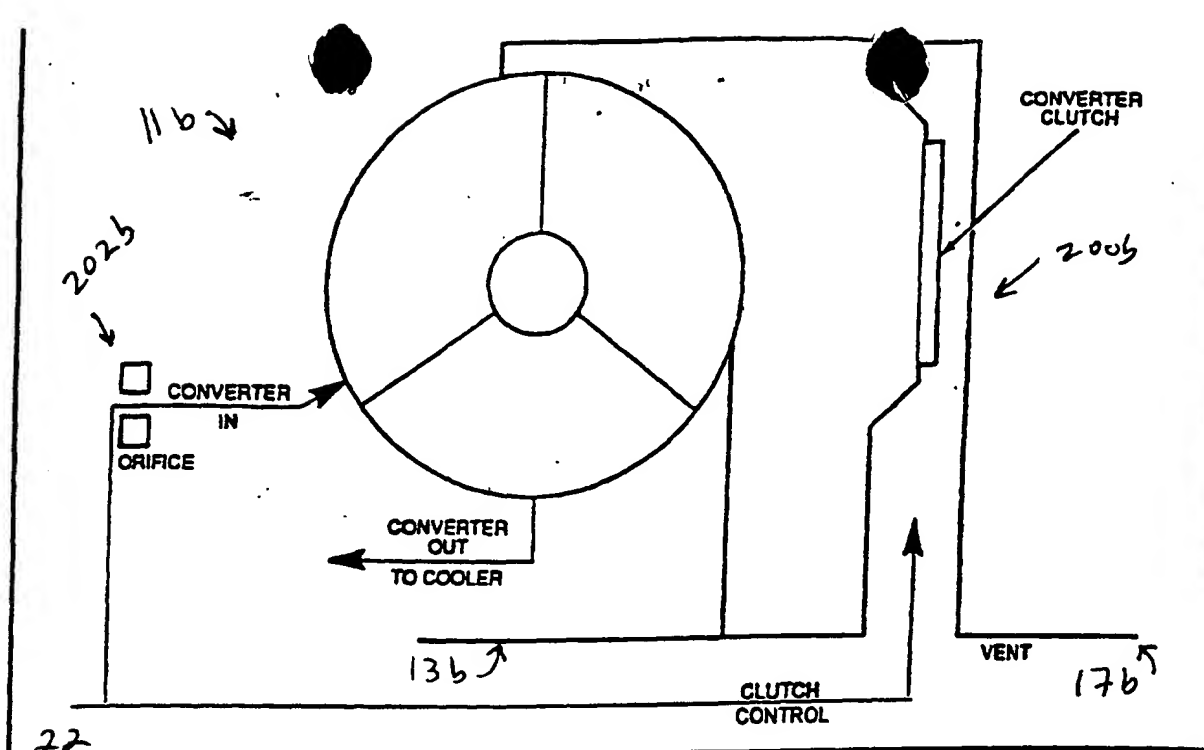


Figure 18 - Three-Circuit Unlock Mode (disengaged)

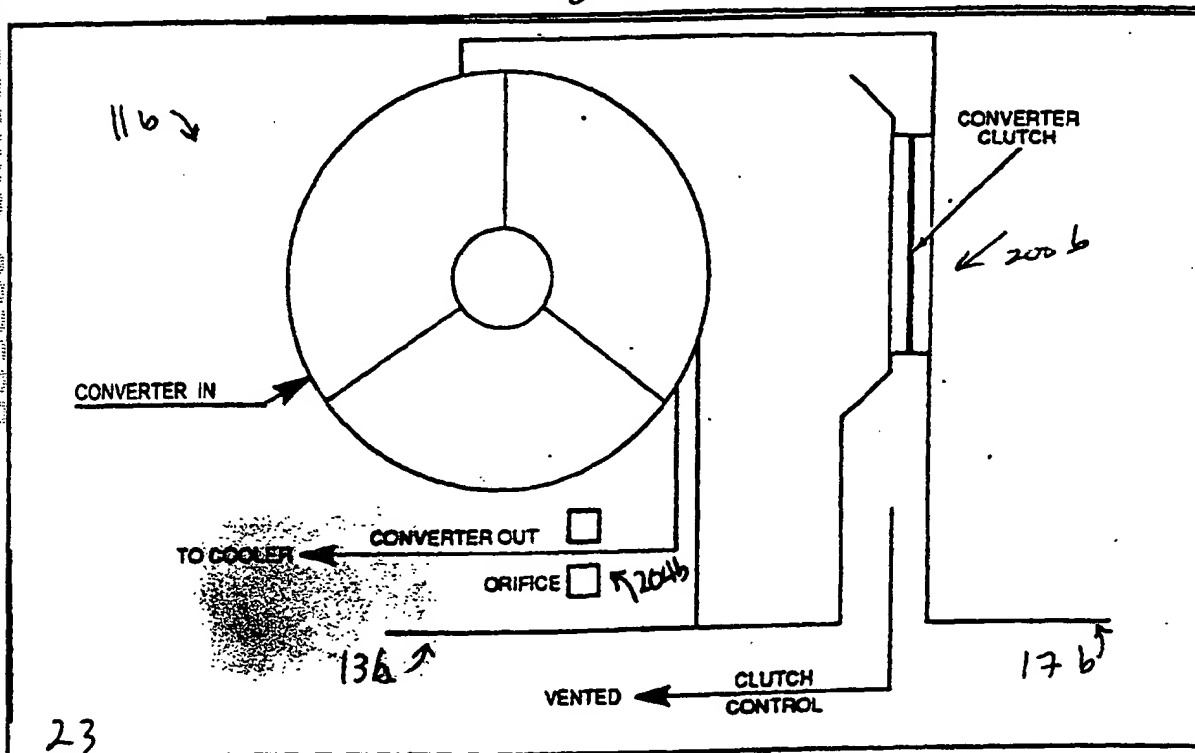


Figure 17 - Three-Circuit Lockup Mode (engaged)